

## SUMMARY

This report presents a FOA project, commissioned by Swedish Rescue Services Agency (SRV), undertaken in cooperation with the Central Board for Real Estate Data (CFD). The task has been to develop a method and a model to simulate the response times of rescue services when dealing with fires in residential housing in Swedish municipalities and to apply such a simulation to all of Sweden. The first section describes the method and model that were utilized, particularly with regard to quality issues.

The computer runs have simulated emergency responses to each population point with a registered population, calculating the optimum response time, i.e. the arrival of the first rescue force with at least five firemen, which is the minimum number for performing a rescue task requiring breathing apparatus.

It turned out that the simulation's weakest link is the road network, which has been the prime cause for the exclusion of municipalities that could not be simulated. Thirteen out of 286 municipalities were removed. When comparing these computer runs with a few new simulations using a better road network, the conclusion was that the computer runs in general produced acceptable results.

The computer run results show that there is a great difference between the mean response times in Sweden's municipalities. The metropolitan areas have the best performance, while most of northern Sweden and some areas in the south stand at the other end of the spectrum.

The work ends with an account of how the model has been applied to the Karlskrona and Ronneby municipalities, *inter alia* studying how the optimum response areas and times are affected by the disbandment of either or both of the Eringsboda and Holmsjö rescue forces.